Water Information Management Program

Background

Protecting park aquatic resources from impairment requires ongoing data collection, analysis, communication, and archiving to demonstrate status and trends and provide a credible foundation for resource management. Data and information are vital organizational assets that must be managed properly to ensure the investment made in their collection and analysis was not squandered.

The Water Information Management Program supports parks and networks in the management and archiving of hydrologic data including database design, data management, and GIS applications. Program staff recommend standards for hydrographic data sets, conduct water body and water quality inventories for parks, maintain the servicewide STORET national water quality database and other systems, and assist in acquiring digital hydrographic data.

Highlights and Accomplishments

The servicewide STORET national water quality database now contains more than 3.45 million results for 1,800 physical, chemical, or biological characteristics from 26,570 monitoring locations in support of 882 different projects conducted in or near 227 units of the National Park System. This represents one of the largest sources of data in the Environmental Protection Agency's STORET Data Warehouse. These data are used by the states and EPA to determine whether waters are attaining state water quality standards under the Clean Water Act and by the NPS and others to monitor the health of park aquatic ecosystems.

Program staff cooperated with the U.S. Geological Survey to help produce the high-resolution National Hydrography Dataset (NHD) – basically digital GIS maps of the nation's surface water hydrography – for all subbasins containing national park units. This included incorporating NPS hydrography where available.

NPSTORET v.1.70, a complete water quality database management system that allows users to enter information about their water quality monitoring projects, stations, metadata, and results in a Microsoft Access database was recently released. Users can generate reports, statistics, and graphics describing entered data. Data can be imported from a variety of data sources and formats, including the three major national water quality databases: Environmental Protection Agency's Legacy STORET, EPA's Modern STORET, and U.S. Geological Survey's National Water Information System. Users can use their own water quality standards and display analytical results on maps.

Program Links (Click the links below for additional information)

Baseline Water Quality Data Inventory & Analysis Report
Vital Signs Guidance
Vital Signs Water Quality Data Management and Archiving
Water Quality Data System (STORET)

Enhancing the NPS' water resources management while preserving its investment in data collection, analysis, communication, and archiving are key aspects of the Water Information Management Program.

The Water Information Management Program has issued a series of Baseline Water Quality Data Inventory and Analysis Reports summarizing and documenting water quality conditions at 236 parks.

Program staff maintain a Designated Use and Impairments database that tracks servicewide hydrographic statistics and Clean Water Act impairments for strategic planning purposes.

Status and Future

Program staff continue to populate the servicewide copy of STORET with data furnished by parks, networks, and others and make those data available through the EPA's STORET Data Warehouse while partnering with several states and EPA to develop a distributed STORET replacement database based on the water quality exchange (WQX) format. NPSTORET development continues with the emphasis on archiving continuous time-series data and WQX compatibility. Program staff help facilitate NHD stewardship and work to complete the remaining water quality inventories.

www.nature.nps.gov/water/infodata.cfm
epa.gov/storet/dw_home.html